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MICRO-LEPIDOPTERA.

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LAVERNA.

This genus may be distinguished by the tufts of raised scales on the anterior wings. The antennae are more than half as long as the wings, simple, inserted just above the eyes. Head and face smooth, with appressed scales. Face rather broad. Tongue very short. No maxillary palpi; labial palpi curving around the sides of the head upwards, the tips approaching each other on the vertex, the third joint shorter than the second, which is laterally compressed and slightly clavate.

For a fuller diagnosis, see Dr. Clemens' *Proc. Acad. Nat. Sci. Phila.*, 1860, p. 170.

L. cephalonthiella. *N. sp.*

Tongue and face white; palpi grayish-white beneath, gray above; antennae gray, annulate with dark brown, tipped with white, and with four or five very distinct white annulations near the tip. Thorax and wings dark bluish-gray, flecked with numerous white scales and specks. The wings are irregularly spotted with velvety black; have an ochreous patch at the base of the inner margin, not very distinct, and a larger one upon the disc, and an irregular indistinctly outlined fasciae nearly crossing the wing, just before the third costal streak, and dusted with golden in the middle, and with white upon the costa. The ochreous patches are not distinct in outline, and seem to be composed of confluent streaks. Two rather large tufts of elevated scales within the inner margin, the first velvety black, the second ochreous, margined with velvety black, and larger than the first. The first tuft is before, and the second behind the middle. Three velvety black, slightly oblique costal streaks, the first small, placed before the middle; the second larger, behind the middle; and the third and largest just before the ciliae. In some lights,

the tufts glow with crimson and purple hues, and the ochreous patches assume the form of indefinite wide bands. There is an oblique costal streak of rather dense white dusting before the apex, and an opposite dorsal one. Three dark brown hinder marginal lines, one at the base of the ciliae, the second before the apex, and the third at the apex, of the ciliae. Dorsal ciliae dark slate-colour, *with eight or ten distinct white specks near the base*. Posterior wings and ciliae slate-colour. Abdomen slate-colour, with crimson and purplish reflections. But the colours of the entire insect vary somewhat with the direction of the light. *Alar ex.* about $\frac{1}{3}$ inch. Common. Kentucky.

The larva mines the leaves of the Button Bush (*Cephalanthus occidentalis*). I found them early in October, and a few days afterwards, they became pupae, and within a week thereafter, produced the imago. It pupates on the ground, and the imago most probably hibernates.

The mine and larva resemble those of the genus *Antispila*, but the larva is reddish.

This is the only *Laverna* that I have found, and is a very handsome insect.

ASPIDISCA, *Clemens*.

Head smooth, with appressed scales. Tongue naked, short. Labial palpi short, much separated. Antennae about one half as long as the wings. Size, very small.

(This brief, generic diagnosis is condensed from Dr. Clemens' account published in the *Proc. Acad. Nat. Sci. Phila.*, 1860, v. II., *corrected at p. 209*. Dr. Clemens errs, however, in the statement that there are no maxillary palpi. They are not visible without dissection, but upon dissection, minute *one-jointed* palpi are perceptible).

The larvae are cylindrical, depressed; head smaller than the first segment. No true legs nor prolegs, but in their places, and also on some of the other segments, are what appear to be discs, which act as suckers. It is doubtful, however, if they do so act, as they appear on the dorsal as well as ventral surfaces. They are miners through their whole larval existence, and when ready to pupate, they cut out a minute case, and, sewing together the edges, let themselves down by a thread, and, notwithstanding their apparent want of means of locomotion, they manage to transport themselves and their cases frequently through long grass, or over seemingly impracticable routes, for many rods, before spinning the silken "byssus," by which the case is attached to a tree, or fence, or blade of grass, for the pupal repose.

1. *A. splendoriferella*, Clem. *Loc. cit.*

Lyonetia Saccatella, Packard, Guide, p. 355, and plate 8, figs. 18, a and b.

Dr. Clemens found this "perfect little gem," as Dr. Packard truly calls it, mining the leaves of Haw trees (*Crataegus*) in August, and cutting out its cases, preparatory to pupating, *in the latter part of August and in September*. He also found a similar larva mining the leaves of the Wild Cherry tree (*Prunus serotina*) at the same time, but was uncertain as to the species. I have bred it from the mines, and find it to be this species. I have also bred it from the leaves of the Sweet Scented Crab (*Pyrus coronaria*), and from those of the Apple. At Linden Grove Cemetery, at this place, it occurs by the million. In that Cemetery (so called because there are only two or three Linden saplings in it, I suppose), there are a great many Wild Cherry trees, and in August, scarcely a leaf can be seen without a mine, and, usually, from two to five or six in each; and in September, after they begin to descend, to pass under one of the trees is like sticking one's head into a cobweb. A little later, the trees and fences are plastered over with their little cases.

Dr. Packard's account of his *Lyonetia saccatella* is brief, as it must of necessity be, in such a work as the "Guide," but I think there can be no doubt that it is identical with this species, which was first described by Dr. Clemens in the "*Proceedings*," *loc. cit.* I am led to this conclusion by the following facts:—

The species of *Lyonetia* are not case bearers, but leave their mines to pupate on a *nidus* on the ground. The antennae in *Lyonetia* are about as long as the wings, while Dr. Packard's figure represents them, as they are in this species, about one half as long as the wings. The description of the species by Dr. Packard is so accurate for this species (considering its brevity), that it is not probable that two species belonging to different genera, should resemble each other so closely; and he found, at the same time, upon the same food-plant, and with the extraordinary "mimicry" carried so far, that one of the species, belonging to a genus in which there are no other case bearers, assumes the case bearing habit in imitation of the other. Such a case of mimicry would delight Messrs. Wallace & Bates beyond measure.

Dr. Packard evidently supposed that his species was a case bearer throughout its larval existence. But the fact which he states, that the case is made of the cuticle of leaves, shews that it has once been a miner. He found it on the leaves of the Apple, in the latter part of August and in

September—just the period when *A. splendoriferella* is cutting out its cases, crawling over the leaves, and fixing its byssus to the limbs and trunks, as Dr. Packard's species did.

On the other hand, some of the minuter markings, towards the apex of the wing, are not mentioned by Dr. Packard, nor shown in the figure. The form of the case in the figure is by no means accurate, though that of the larva is. And the *alar ex.* is stated to be .20 inch, whilst I have never found it to exceed two lines.

2. *A. luciflua*, Clem. *Op. cit.*, p. 209.

I have found the larvae mining the leaves of Hickory trees, but have not yet succeeded in raising them from the mines. According to Dr. Clemens' description, it is a little larger than *A. splendoriferella*, and resembles more closely the next described species. Kentucky and Pennsylvania. Not common.

3. *A. Ella*. *N. sp.*

Head silvery white, tinged with yellowish. Antennae pale fuscous above, silvery beneath; thorax and about the basal one-third of the wings, silvery gray, remainder of the wings golden brown or dark brown, according to the light, sometimes appearing reddish golden. A rather large costal white streak in the dark part of the wing, just before the middle, with an indistinct reddish or yellowish spot before it, within the costal margin, and a triangular white dorsal streak nearly opposite, but a little before, and a costal faint yellowish indistinct spot behind it. A triangular, velvety, black, apical spot with its base towards the ciliae, a small silvery spot at its apex, and a narrow silvery line on each of its sides; ciliae silvery. Under surface and legs silvery white. *Alar ex.* about $\frac{1}{4}$ inch. (Smaller than *A. splendoriferella*). Larva and food plant unknown. A single specimen found in its case attached to the bark of an Oak tree.

Named in honor of a lady friend, who, like our "micro," is both "*petite*" and pretty.

Dr. Clemens mentions the larvae of two other species, one of which mines the leaves of the Ironwood (*Ostrya Virginica*), and the other mines different species of Willows (*Salix*). I have met with both mines, but, like Dr. Clemens, I have never seen the imagines, unless *A. Ella* should prove to be one of them.

These are the only known species of the genus.